

What is claimed is:

1. A silent chain and sprocket assembly comprising:

a sprocket having a plurality of low profile protrusions extending outwardly from said sprocket at 5 locations spaced along an outer periphery of the sprocket;

a silent chain having a series of interleaved inner and outer link rows that are interleaved along a chain direction;

10 adjacent inner and outer link rows are joined to each other by members extending through interleaved portions of adjacent inner and outer link rows to form a rotatable joint between the adjacent inner and outer link rows;

15 the links of said inner and outer link rows form a surface that overlies the sprocket protrusions and conforms closely to said low profile protrusions on said sprocket; and

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the link surface extending along the chain direction
20 a distance substantially the length of the link along the
chain direction.

2. The silent chain and sprocket assembly of claim 1
wherein the surface of the links that is sized to overlie
the low profile protrusions of the sprocket is at a back-
side of the chain.

3. The silent chain and sprocket assembly of claim
2 wherein the links have a surface that defines two teeth
extending from the link at a front-side of the chain.

4. The silent chain and sprocket assembly of claim
1 wherein the surface that overlies the sprocket
protrusions extends along the chain direction of the
links a distance that approximates the distance from a
5 center of a member joining the link to one adjacent row
of links to a center of a member joining the link to
another adjacent row of links.

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5. A silent chain and sprocket assembly comprising:

a front-side sprocket, said front-side sprocket having a plurality of teeth spaced about an outer 5 periphery of said front-side sprocket;

a back-side sprocket, said back-side sprocket having a plurality of small, low profile, protrusions spaced about an outer periphery of said back-side sprocket;

10 a silent chain having a front-side and back-side, said front-side of said chain engaging said front-side sprocket and said back-side of said chain engaging said back-side sprocket;

15 the chain having link plates forming inner and outer link rows, said inner and outer link rows interleaved along a chain direction;

the link plates having a front-side at the front-side of the chain, and a back-side at the back-side of the chain;

20 the link plates forming two apertures spaced along the chain direction;

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the link plates forming two teeth to engage a tooth
of said front-side sprocket at an end of the link along
the chain direction, to engage a second tooth at another
end of the link along the chain direction, and to engage
25 a third tooth intermediate the teeth at the ends of the
link plate;

the link plates defining a back-side surface that
conforms closely to a portion of the back-side sprocket
extending a distance substantially equal to a length of
30 the link plates along the chain direction.

6. The silent chain and sprocket assembly of claim
5 wherein the low profile protrusions of the back-side
sprocket are formed by two sprocket surfaces that meet at
the protrusion and extend oppositely from each other
5 along the periphery of the back-side sprocket from a
first end to a second end a distance that is
approximately the length of the back-side surface of the
link plates.

7. The silent chain and sprocket assembly of claim
6 wherein the back-side sprocket surfaces are generally
flat.

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8. The silent chain and sprocket assembly of claim
6 wherein the back-side sprocket surfaces are generally
flat between the first and second ends, and that extend
outwardly from the back-side sprocket near their first
5 and second ends.

9. The silent chain and sprocket assembly of claim
5 wherein the back-side surfaces of the link plates
closely conform to the low profile protrusions along the
back-side sprocket, to the back-sides formed to extend
5 along the periphery of the sprocket to overlie a
protrusion.

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